

CLAIMS

What is claimed is:

1. Assembly bearing with hydraulic damping, particularly for supporting engines and/or gear-boxes in motor vehicles, with a working chamber (10) and a compensation chamber (20) each having partially elastically deformable walls (30, 40) and which are separated from one another by a dividing wall (50), but are interconnected through a damping channel (60) through which a liquid is guided, and with an additional passage opening (14) which can be variably adjusted from outside, characterized in that the dividing wall (50) comprises a decoupling device for isolating high-frequency, low-amplitude vibrations and that the additional passage opening (14) is disposed upstream or downstream of the decoupling device.

2. Assembly bearing according to Claim 1, characterized in that the passage opening (14) is disposed upstream of the decoupling device.

3. Assembly bearing according to Claim 1 or 2, characterized in that the decoupling device comprises a membrane (54).

4. Assembly bearing according to one of Claims 1 to 3, characterized in that during the operation of the assembly the passage opening (14) is variably adjustable depending on at least one control input provided by the assembly.

5. Assembly bearing according to Claim 4, characterized in that there is provided a control system for adjusting the passage opening (14).

6. Assembly bearing according to Claim 4 or 5, characterized in that the dominant shaft order is selected as the control input.

7. Assembly bearing according to one of Claims 4 to 6, characterized in that the second shaft order is selected as the control input.

8. Assembly bearing according to one of Claims 1 to 7, characterized in that the passage opening (14) is formed by a peripherally extending conical surface (13) disposed in the working chamber (10) and by a lowering plate (11) of adjustable height and disposed in the working chamber (10) in correspondence with this conical surface (13).

9. Assembly bearing according to Claim 8, characterized in that the outer edge of the lowering plate (11) is bent away from the decoupling device.

10. Assembly bearing according to Claim 7 or 8, characterized in that the peripherally extending conical surface (13) is provided on a ring disposed on the dividing wall (50).

11. Assembly bearing according to one of Claims 8 to 10, characterized in that the lowering plate (11) is borne by a shifting rod (15) disposed essentially centrally in bearing (1) and is axially movable; said rod being guided through the corresponding central openings from below, through the decoupling device (20) and through the compensation chamber (20) and extending all the way into the working chamber (10).

12. Assembly bearing according to Claim 11, characterized in that there is provided a device for an axial displacement of the shifting rod (15).

13. Assembly bearing according to Claim 12, characterized in that the device is an electric motor (16).

14. Assembly bearing according to Claim 13, characterized in that the electric motor (16) is operable by means of a control system.

15. Assembly bearing according to one of Claims 8 to 14, characterized in that the lowering plate (11) is provided with an opening (18) for reducing the damping.

16. Assembly bearing according to one of Claims 1 to 15, characterized in that there is provided an idling mode.

17. Assembly bearing according to Claim 16, characterized in that in the idling mode the passage opening (14) is closed and that the decoupling device is provided with a membrane (54) with limited free play, the free play of the membrane being released in the idling mode.

18. Assembly bearing according to Claim 17, characterized in that to release the free play of the membrane the lower limit of said free play can be lowered.

19. Assembly bearing according to Claim 18, characterized in that the shifting rod (15) is provided with an actuation element whereby when the lowering plate (11) is lowered, the lower limit of the free play of the membrane can be moved downward against a spring force.

20. Assembly bearing according to Claim 19, characterized in that the bottom (52b) of the membrane cage (52) can be moved downward by means of the lowering plate (11).